

NATIONAL ENVIRONMENTAL POLICY ACT DOCUMENTATIONFOR THEHANFORD WASTE VITRIFICATION PLANT

Completion of the Final Hanford Defense Waste - Environmental Impact Statement (HDW-EIS), satisfies the National Environmental Policy Act (NEPA) and the State Environmental Policy Act (SEPA) compliance requirements for the initiation of physical construction of the Hanford Waste Vitrification Plant (HWVP). The HDW-EIS was released in December 1987, and the resultant Record of Decision (ROD), was published April 14, 1988 (53 FR 12449). Chapter 197 of the Washington Administrative Code (WAC-197-11-610) addresses the use of NEPA documents: "(3) An agency may adopt a NEPA EIS as a substitute for preparing a SEPA EIS if (a) the requirements of 197-11-600 and 197-11-630 are met (in which case the procedures in Parts Three through Five of these rules for preparing an EIS shall not apply); and (b) The federal EIS is not found inadequate: (i) By a court; (ii) by the Council on Environmental Quality (CEQ) (or is at issue in a predecision referral to CEQ) under the NEPA regulations; or (iii) by the administrator of the United States Environmental Protection Agency under section 309 of the Clean Air Act, 42 U.S.C. 1857." A brief background of the Final HDW-EIS follows.

In accordance with the requirements of the National Environmental Policy Act (NEPA), as amended, and implementing regulations of the Council on Environmental Quality (CEQ) published in the Code of Federal Regulations as 40 CFR 1500, the Final Hanford Defense Waste-Environmental Impact Statement (HDW-EIS) was written early in the decision-making process for the disposal of Hanford defense high-level, transuranic and tank wastes.

The HDW-EIS was intended to be both a programmatic EIS (to support broad decisions with respect to the disposal strategies for the six classes of defense wastes) and an implementation EIS intended to provide project-specific environmental input for decisions on moving forward with certain disposal activities such as construction of the Hanford Waste Vitrification Plant (HWVP). In the Record of Decision (ROD) (issued on April 14, 1988 [53 FR 12449]), the decision to implement the Preferred Alternative (presented in the Final HDW-EIS) includes the design, construction, and operation of the HWVP.

The material presented in the Final HDW-EIS is sufficient for the requisite NEPA documentation for the HWVP. Material specific to the construction and operation of the HWVP was extracted from source documents (Rockwell 1985, 1987), summarized where appropriate, and used to form the basis for calculating estimates of impacts. These impacts are presented in the Final HDW-EIS, Appendix C. The impacts identified in Appendix C are aggregated with other impacts in the body of the Final HDW-EIS.

Because impacts of construction and operation are included with those of other aspects of implementing the disposal options, the relatively small impacts of the HWVP may not be recognized without reading Appendix C. In response to comments received on the draft HDW-EIS, the Final HDW-EIS specifically states that impacts of HWVP were included in impacts given for the reference and preferred alternatives. What follows is a summary of environmental aspects related to the HWVP as they appear in the main body of the Final HDW-EIS.

DESCRIPTION AND COMPARISON OF ALTERNATIVES

Section 3.3 states that, "Most process methods and facilities are described in Appendix B. Three major facilities for use with the reference, geologic and preferred alternatives have been developed in sufficient detail to facilitate quantification of impacts for construction, operation and decommissioning." Details of glass immobilization for geologic disposal are given in Section B.1.2.2. Steps in the vitrification of waste for other alternatives are given in Sections B.2.1, B.2.3, and B.2.5.

The use of the HWVP in the geologic disposal alternative is described in Section 3.3.1.1 for existing tank waste and in Section 3.3.1.2 for future tank waste. (Note that in the geologic disposal alternative, the HWVP would require additional equipment over that described for the reference and preferred alternatives.) The use of the HWVP in the reference alternative is described in Section 3.3.3.1 for existing tank waste and in Section 3.3.3.2 for future tank waste. The use of the HWVP in the preferred alternative is described in Section 3.3.5.1 for existing tank waste and in Section 3.3.5.2 for future tank waste. Reference is made section by section to the contents of Appendix C wherein the potential impacts of HWVP are estimated.

A summary comparison of the impacts of the alternatives, including those of the HWVP, is given in Section 3.4.1.

AFFECTED ENVIRONMENT

Since the HWVP is located next to B Plant in the 200 East Area, the plant site description and the affected environment for the HWVP are the same as that presented in Chapter 4.

POSTULATED IMPACTS AND POTENTIAL ENVIRONMENTAL CONSEQUENCES

The impacts associated with implementing the alternatives that are presented in this chapter include those associated with the HWVP. Cumulative impacts from the HWVP and all the other facilities on the Hanford Site are presented in Section 5.1.4.1.

For the geologic alternative, operational impacts are given in Section 5.2.2.1, and impacts from operational accidents are given in Section 5.2.2.2. Operational accidents are also discussed in Section H.3.1 for existing tank wastes and H.3.2 for future tank wastes. The bases for these accidents and their consequences are detailed in an EIS support document (PNL 1986). Other impacts such as nonradiological pollutant emissions, resource commitments etc., for the geologic alternative, including HWVP, are given in Sections 5.2.2.3 et seq.

The impacts of not constructing and operating an HWVP are bounded by the disposal alternative of in-place stabilization and disposal and the no action alternative, as given in Section 5.3 and 5.5 respectively.

For the reference alternative, radiological consequences from routine operations are given in Section 5.4.2.1. It is noted that less than 10% of the occupational dose results from the HWVP, TGF and the WRAP combined. Radiological consequences from postulated accidents are given in Section 5.4.2.2. In parallel with the presentation for the geologic alternative, other impacts such as nonradiological pollutant emissions, resource commitments etc., including the HWVP, are given in Sections 5.4.2.3 et seq.

For the preferred alternative, radiological consequences from routine operations are given in Section 5.6.2.1. Again, the HWVP would contribute less than 10% of the occupational dose. Radiological consequences of accidents are given in Section 5.6.2.2. Other impacts such as nonradiological pollutant emissions, resource commitments etc., including those from HWVP, are given in Sections 5.6.2.3. et seq.

APPLICABLE REGULATIONS

Although individual facilities are not called out specifically, the applicable regulations cited in Chapter 6 would govern the construction, operation and decommissioning of HWVP as well as other aspects of waste disposal.

It is the DOE-RL's position that the Final HDW-EIS, written under NEPA, fulfills the requirements of SEPA for the HWVP.

REFERENCES

DOE 1987, Final Environmental Impact Statement, Disposal of Hanford Defense High-Level, Transuranic and Tank Wastes, DOE/EIS-0113, U.S. Department of Energy, Washington, D.C.

Rockwell 1985, Hanford Defense Waste Disposal Alternatives: Engineering Support Data for the Hanford Defense Waste - Environmental Impact Statement RHO-RE-ST-30P, December 1985.

Rockwell 1987, Engineering Support Data Update for the Hanford Defense Waste - Environmental Impact Statement, RHO-RE-ST-30 ADD P, February 1987.

PNL 1986, Potential Radiological Impacts of Upper-Bound Operational Accidents During Proposed Disposal Alternatives for Hanford Defense Waste, Mishima et al, PNL-5356, February 1986.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

IN THE MATTER OF HAZARDOUS WASTE
CONTROL AT U.S. DEPARTMENT OF
ENERGY FACILITIES LOCATED ON THE
HANFORD RESERVATION NEAR RICHLAND
WASHINGTON - IN COMPLIANCE WITH
RULES AND REGULATIONS OF THE
DEPARTMENT OF ECOLOGY

ORDER
NO. 84-267

TO: United States Department of Energy
Richland Operations Office
P. O. Box 550
Richland, Washington 99352

The Department of Ecology has been designated as the state agency responsible for implementation of the Federal Resource Conservation and Control Act of 1976 (42 U.S.C. 6901). The Department of Ecology was granted authority to:

1. Enter at reasonable times establishments regulated under RCW 70.105.130 for the purposes of inspection, monitoring, and sampling; and
2. Adopt rules necessary to implement RCW 70.105.

The Department of Ecology subsequently developed and adopted Dangerous Waste Regulations specific to the State of Washington in March of 1982 - (ch. 173-303 WAC).

The state regulations were subsequently recognized and the state granted interim authorization by the U.S. Environmental Protection Agency.

Both the federal and state regulations include, as regulated entities, U.S. Department of Energy facilities operated under the Atomic Energy Act of 1954. (42 U.S.C. 2011 et seq.) Thereby, and in view of the foregoing

IT IS HEREBY ORDERED that the U.S. Department of Energy take immediate action to ensure full compliance with the above state dangerous waste regulations on the Hanford Reservation.

FURTHERMORE, IT IS HEREBY ORDERED that the Department of Energy allow access to the Hanford Reservation by appropriate state officials for formal, on-site, compliance assessments pursuant to RCW 70.105.130 and 42 U.S.C. 6927. Arrangements for an initial formal review and inspection shall be made prior to May 25, 1984; the inspection shall be completed by June 15, 1984.

Failure to initiate timely actions designed to achieve compliance with the above will be considered grounds for immediate enforcement action.

Dated at Olympia, Washington

MAY 3 1964



Lynda L. Brothers
Assistant Director
Office of Hazardous Substances
and Air Quality Control

DEPARTMENT OF ECOLOGY

IN THE MATTER OF COMPLIANCE)	ACKNOWLEDGEMENT OF SERVICE
BY UNITED STATES DEPARTMENT)	No. DE 84-267
OF ENERGY)	

To: Department of Ecology
State of Washington
Olympia, Washington 98504
Attention: Enforcement Officer

Receipt is acknowledged of Order No. DE 84-267.

DATED this _____ day of _____, _____.

(Signature)

(Title)



001116

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Mail Stop PV-11 • Olympia, Washington 98504 • (206) 459-6000

DEC 26 1984

CERTIFIED MAIL

United States Department of Energy
Richland Operations Office
Post Office Box 550
Richland, WA 99352

Gentlemen:

Enclosed is Order No. DE 84-720. All correspondence relating to this document should be directed to the enforcement officer. If you have any questions concerning the content of the document, please call Roger Stanley, Olympia, telephone (206) 459-6031.

A form entitled "Acknowledgment of Service" is also enclosed. Please sign this form and return it to this office.

This order is issued under the provisions of RCW 70.105.095. Any person feeling aggrieved by this order may obtain review thereof by application, within 30 days of receipt of this order, to the Pollution Control Hearings Board, Mail Stop PY-21, Olympia, WA 98504, with a copy to the Director, Department of Ecology, Mail Stop PV-11, Olympia, WA 98504, pursuant to the provisions of Chapter 43.21B RCW and the rules and regulations adopted thereunder.

Sincerely,

A handwritten signature in cursive script that reads "Philip E. Miller".

Philip E. Miller
Enforcement Officer

PM:jv

Enclosures

001117

DEPARTMENT OF ECOLOGY

IN THE MATTER OF THE COMPLIANCE BY)
UNITED STATES DEPARTMENT OF ENERGY,)
RICHLAND OPERATIONS OFFICE)
with Chapter 70.105 RCW and the)
Rules and Regulations of the)
Department of Ecology)

ORDER
No. DE 84-720

To: United States Department of Energy
Richland Operations Office
Post Office Box 550
Richland, WA 99352

Chapter 173-303 WAC, entitled "Dangerous Waste Regulations," designates those solid wastes which are dangerous or extremely hazardous to the public health and environment; and provides for surveillance and monitoring of dangerous wastes until they are detoxified, reclaimed, neutralized, or disposed of safely.

The United States Department of Energy, acting as owner and operator of the Hanford reservation near Richland, Washington, generates dangerous waste and is, therefore, required to follow Chapter 173-303 WAC.

On July 19, 1984 the Department of Ecology determined that the Department of Energy had failed to comply with interim status standards as prescribed under Chapter 173-303 WAC.

RCW 70.105.095 reads in part: "Whenever on the basis of any information the department determines that a person has violated or is about to violate any provision of this chapter, the department may issue an order requiring compliance either immediately or within a specified period of time."

In view of the foregoing and in accordance with the provisions of RCW 70.105.095.

IT IS ORDERED THAT the United States Department of Energy shall, upon receipt of this Order, take appropriate action in accordance with the following instructions:

- A. By February 1, 1985: Submit for departmental review and approval, a complete design package covering the planned extremely hazardous waste transshipment facility (replacing 2727-S).
- B. By February 1, 1985: Submit for departmental review and approval a Compliance Plan regarding disposal of laboratory wastes and utilization of chemical sewers. This submittal shall detail the history of individual chemical sewers throughout the Hanford reservation and shall include a complete

listing of wastes¹ known to have been disposed of via these facilities.

- C. By February 1, 1985: Amend and submit the United States Department of Energy's nonradioactive hazardous waste Part A permit application² to include all Hanford site facilities which have received designated nonradioactive dangerous waste regardless of whether or not they have also received wastes containing low level radioactive contaminants. Facilities to be added under this requirement include but are not limited to:
1. The 100 H area solar evaporation basins, and
 2. 200 east and 200 west chemical sewers and facilities to which they discharge.
- D. By February 1, 1985: Submit for departmental review and approval a site-wide dangerous waste ground water monitoring Outline and Proposal which clearly details the Department of Energy's plans for compliance with interim status standards. These standards are detailed under WAC 173-303-400 which incorporates by reference 40 CFR Part 265, Subpart F (Ground Water Monitoring). This outline shall include a detailed description of dangerous waste ground water monitoring systems in place as well as proposed additional systems to be established at facilities covered under Subsection C, above.³
- E. Implementation of the approved Outline and Proposal (under Subsection D, above) shall be achieved and compliance shall be noted by letter to the Department of Ecology no later than August 1, 1985.
- F. By February 1, 1985: Submit for departmental review a written demonstration of compliance with WAC 173-303-300 (GENERAL WASTE ANALYSIS). This demonstration shall include submittal of a

¹ Including volumes and frequencies.

² Originally submitted to the Department of Ecology on November 30, 1984.

³ The outline/proposal shall include a description of well locations and depths (including maps), a synopsis of pertinent geohydrological information utilized in determining placement, a description of methods of construction and materials used (or to be used), a sampling plan and a description of analytical methods and test parameters.

Hanford site Waste Analysis Plan (as per WAC 173-303-300(5)). This plan shall also include a detailed description of procedures established for the testing (designation) of unknowns.

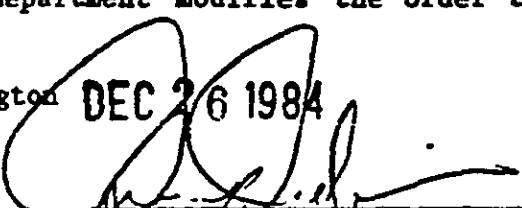
- G. Finalization of the above Waste Analysis Plan into a document which also addresses wastes generated by facilities being added to the Part A permit application under Subsection C, above, shall be completed and the plan submitted to the Department of Ecology no later than May 1, 1985.
- H. By February 1, 1985: Submit for departmental review a written demonstration of compliance with WAC 173-303-330 (PERSONNEL TRAINING).
- I. By May 1, 1985: Submit for departmental review a written demonstration of compliance with WAC 173-303-320 (GENERAL INSPECTION). This submittal shall include a site-wide Inspection Plan covering all appropriate facilities including those covered under Subsection C, above.
- J. By May 1, 1985: Submit for departmental review a written demonstration of compliance with WAC 173-303-350 (CONTINGENCY PLAN AND EMERGENCY PROCEDURES). This submittal shall include a site-wide Contingency Plan which addresses both site-wide and facility-specific information as per WAC 173-303-350.
- K. By May 1, 1985: Submit for departmental review and approval a written demonstration of compliance with WAC 173-303-400, which incorporates by reference 40 CFR Part 265, Subpart G (CLOSURE AND POST-CLOSURE). This demonstration shall include submittal of all facility-specific Closure and Post Closure Plans as per Subpart G.

Any person who fails to take corrective action as specified in a compliance order shall be liable for a civil penalty of not more than ten thousand dollars for each day of continued noncompliance. In addition, the department may suspend or revoke any permits and/or certificates issued under the provisions of this chapter to a person who fails to comply with an order directed against him.

Any order shall become final unless, no later than thirty days after the order is served, the person or persons named in the order request a public hearing. The request shall be delivered either by registered mail or personally to the department. Upon receiving a request for a hearing, the department shall promptly conduct a public hearing to consider testimony and new information regarding the order. The department may, at its discretion, either modify the order or maintain it unchanged. The order shall become effective immediately after the department reaches a final decision, unless the department modifies the order to specify another compliance date.

DATED at Olympia, Washington

DEC 26 1984



Donald F. Dubois
Assistant Director
Department of Ecology
State of Washington

DEPARTMENT OF ECOLOGY

IN THE MATTER OF COMPLIANCE)
BY UNITED STATES DEPARTMENT OF)
ENERGY, RICHLAND OPERATIONS OFFICE)

ACKNOWLEDGEMENT OF SERVICE
No. DE 84-720

To: Department of Ecology
State of Washington
Olympia, Washington 98504
Attention: Enforcement Officer

Receipt is acknowledged of Order No. DE 84-720.

DATED this _____ day of _____, _____.

(Signature)

(Title)

**Department of Energy**

Richland Operations Office
P.O. Box 550
Richland, Washington 99352

001119

FEB 1 1985

Mr. Don Dubois
Washington Department of Ecology
Mail Stop PV-11
Olympia, Washington 98504

Dear Mr. Dubois:

COMPLIANCE ORDER NO. DE-84-720

This letter and attachment constitutes completion of the requirements identified in the above cited Order for Compliance by February 1, 1985. The Department of Energy response to Item C of the Order has been previously submitted.

The 300 Area process trenches and 400 Area process pond have been deleted from the amended Part A permit application because the Department of Energy does not intend to utilize either facility for the disposal of dangerous waste. Included in the materials submitted are copies of documentation that these facilities will not be utilized for disposal of dangerous waste. The only potentially dangerous waste which has been disposed of to the 400 Area process pond is a biodegradable algacide.

In response to Item D of the Order, we have provided the Department's outline and proposal for a groundwater monitoring plan. While compliance monitoring at hazardous waste facilities is a new effort, we wish to point out that groundwater monitoring has been a major activity on the Hanford Site since the 1940's. To date, facility-specific monitoring conducted by US DOE contractors and site-wide surveillance by the Pacific Northwest Laboratory indicate that there has been no significant impact to water quality from Hanford operations.

The draft groundwater monitoring plan covers not only those nonradioactive facilities listed in the revised Part A permit application, but also includes the 183-H radioactive mixed waste storage facility, the 300 Area process trench and 400 Area process pond. These latter three facilities are included in the plan for information purposes only based upon WDOE's previous expression of interest regarding these facilities. Your comments on these latter three facilities as well as the plans for the facilities covered under the Part A application would be useful. DOE-RL intends to implement the plans described for the 183-H facility and 300 Area process trenches as part of the Hanford groundwater monitoring program. The 400 Area pond groundwater monitoring plan will be reduced in scope from that currently described because there is no indication that dangerous wastes other than the biodegradable algacide have ever been released to the facility.

Mr. Don Dubois

- 2 -

FEB 1 1985

In response to Item B, we have provided a management plan for laboratory waste and chemical sewers. As previously discussed, the waste facilities and chemical sewers addressed in this document are radioactive mixed waste facilities which do not currently fall within the jurisdiction of the Resource Conservation and Recovery Act or Washington Dangerous Waste regulations. The management plan is provided for your review and comments as a matter of comity. Other materials identified in Items I, J, and K of the Order will be submitted to WDOE on May 1, 1985, as planned. These documents are continuing to undergo revision and improvement. Your comments and suggestions are welcome.

If you have any questions concerning the contents of this transmittal, please contact me or Mr. R. E. Gerton on (509) 376-4829.

Very truly yours,

T. R. Fitzsimmons, Assistant Manager
for Safety, Safeguards and
Quality Assurance

SQA:PJK

Attachment

**Department of Energy**

Richland Operations Office
P.O. Box 550
Richland, Washington 99352

001124

MAY 2 1985

Mr. Marc Horton, Assistant Director
Washington Department of Ecology
Mail Stop PV-11
Olympia, Washington 98504

Dear Mr. Horton:

COMPLIANCE ORDER DE-84-720

This letter responds to the March 29, 1985, letter from Mr. Roger Stanley to Mr. Ronald E. Gerton regarding the Department of Energy (DOE) February 1, 1985, submittals pursuant to Order DE-84-720. This letter also confirms subsequent submission dates discussed with Mr. Stanley by telephone on April 3, 1985.

Recognizing the comments that presentations by the several DOE contractors may be viewed as less than comprehensive, it is our plan to develop documentation that more fully details aspects of the site-wide dangerous waste management program in the form of the Part B Permit Application. The facility- and contractor-specific documents provided in the February 1 submittal were intended to meet or exceed the requirements of the Dangerous Waste Regulations and the informational requirements of the Order.

Notwithstanding our intention as mentioned above or the referenced comments, DOE does maintain the ultimate responsibility for management of Hanford Site activities. DOE does provide comprehensive direction to the contractor both through direct instruction on specific issues and through the DOE Order system. The DOE Orders provide the site-wide guidance to all contractors. It is the contractors responsibility to implement the guidance. As there are eight contractors at Hanford, there may be significant differences in the way implementation is documented. These differences, however, should not be viewed as a reduction in the level of compliance or commitment to achieving compliance with applicable regulations. However, we will improve the format of presentation to convey a more cohesive image.

A revised Part A Permit Application will be submitted to the Department of Ecology by June 1, 1985. The permit application will contain the 300 Area Process Trenches, as per WDOE comments regarding DOE proposed revisions to the permit. An expanded assessment of the 400 Area Process Pond has been transmitted under separate cover and addresses the status of the facility as a non-regulated unit. Subsequent revisions to the Part A Application will be prepared as indicated in the March 29 letter.

Mr. Marc Horton

- 2 -

MAY 2 1985

As noted in your letter of February 8, 1985, to me, information relating to radioactive mixed wastes need not be provided until the mixed waste issue is resolved. As a matter of comity, DOE provided in its February 1, 1985, submission to WDOE copies of a management plan for laboratory wastes and chemical sewers. We are revising this document to incorporate appropriate WDOE comments and will provide a copy of the revised plan to WDOE, as a matter of comity, upon completion.

Waste Analysis Plans, Personnel Training Plans, and the Groundwater Monitoring Plan are all being revised to incorporate WDOE comments, and can be submitted for your review by July 15, 1985, as well as in a site-wide format in the Part B Permit Application when that is provided.

The sodium and lithium stored at the 300 Area and 400 Area sites have not been designated as waste material. They are materials awaiting use. The hexone in the 200 S Area is radioactively contaminated and thus falls within the category of a mixed waste. Background information supporting these conclusions can be provided should that detail be necessary.

In preparation for development of the Part B Permit Application, an opportunity for DOE-RL and the contractor staff to meet with WDOE Industrial Section Representatives to discuss compliance related issues and the Part B Permit Application process would, in our opinion, be of much benefit. Such a discussion could be held on the Hanford Site during the week of May 13, 1985. Mr. M. W. Tiernan of my staff will contact Mr. Roger Stanley to confirm meeting arrangements, should such a discussion prove appropriate.

If you have any questions concerning the information discussed above, please contact me or Mr. M. W. Tiernan on (509) 376-7387.

Very truly yours,

Original Signed By
T.R. FITZSIMMONS

T. R. Fitzsimmons, Assistant Manager
for Safety, Safeguards and
Quality Assurance

SQA:PJK

**Department of Energy**

Richland Operations Office
P.O. Box 550
Richland, Washington 99352

001125

MAY 2 1985

Mr. Marc Horton, Assistant Director
Washington Department of Ecology
Mail Stop PV-11
Olympia, Washington 98504

Dear Mr. Horton:

COMPLIANCE ORDER DE-84- 720

Attached with this letter are Inspection Plans, Contingency Plans and Emergency Procedures and Closure Plans and Post Closure Plans. These are provided pursuant to Order DE-84-720.

Recognizing that these submittals may be viewed as less than comprehensive, as expressed in a March 29, 1985, letter from Mr. Roger Stanley, we wish to point out that it is our plan to develop documentation that more fully details aspects of the site-wide dangerous waste management program in the form of a Part B Permit Application. The facility specific- and contractor-specific documents provided here are intended to meet or exceed the requirements of the Dangerous Waste Regulations and the informational requirements of the Order.

The attached Contingency Plans and Emergency Procedures are both facility-specific and extract from or refer to contractor emergency plans. The contractor plans are part of the Hanford emergency preparedness program which is described in the Richland Operations Office Emergency Plan, a controlled document which will be made available to State Inspectors during visits to the Hanford Site. To provide an indication of the emergency preparedness activities and capabilities on the Hanford Site, a copy of the DOE Order directing these activities is enclosed for your information. It should be emphasized that requirements for contingency plans for hazardous waste will be incorporated into the larger emergency preparedness program on the Hanford Site.

The Closure Plan for the 300 Area Process Trench assumes that there are no hazardous wastes in the bottom of the trench. A statistically designed sampling and analysis program has been initiated to validate that assumption and to determine the facility's regulatory status.

Mr. Mark Horton

- 2 -

MAY 2 1985

The Groundwater Monitoring Plan submitted on February 1 and reviewed by your agency will be implemented by August 1, 1985. As indicated in separate correspondence, the revised Groundwater Monitoring Plan will be submitted by July 15, 1985. Contained in that plan was reference to a waiver request for the Non-radioactive Dangerous Waste Landfill groundwater monitoring. That request is being prepared and will also be submitted by the July 15, 1985 date.

If you have any questions regarding the information contained here, please contact me or Mr. M. W. Tiernan on (509) 376-7387.

Very truly yours,

Original Signed By
T.R. FITZSIMMONS

T. R. Fitzsimmons, Assistant Manager
for Safety, Safeguards and
Quality Assurance

SQA:PJK

Attachments
(see list of attachments)

bcc: SQA Off file
PJK Rdg. file
AMS Rdg. file
RM Carosino, OCC

RECORD NOTE: Provides information requested in Comp. Order DE-84-20 to be provided by May 1, 1985.

COST IMPACT: None

ATTACHMENTS

- I. Inspection Plans
- II. Contingency Plans and Emergency Procedures
- III. Closure Plans and Post Closure Plans
- IV. DOE Order

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
EPA REGION 10, SEATTLE, WASHINGTON
1200 SIXTH AVENUE, SUITE 1200

STATE OF WASHINGTON DEPARTMENT OF ECOLOGY
OLYMPIA, WASHINGTON 98504
MAIL STOP PV-11

State of Washington, Department of
Ecology and United States Environmental
Protection Agency,

EPA No. 1085-10-07-3008
Ecology No. DE 86-133

REGULATORY ORDER

v.

United States Department of Energy,
Richland Operations Office.
WA7890008967

I. JURISDICTION

A. Administrative jurisdiction to issue this Complaint exists under 42 U.S.C. §6928 and Chapter 70.105 RCW.

B. The issuing officials are the delegated representatives of the United States Environmental Protection Agency ("EPA") and Washington Department of Ecology ("Ecology").

C. This order is issued to the United States Department of Energy, Richland Operations Office ("USDOE"), an administrative subdivision of the federal government.

D. Pursuant to RCRA Section 3008(a), 42 U.S.C. §6928(a), EPA is authorized to take enforcement action regarding activities (within states granted authority to manage hazardous wastes under RCRA §3006, 42 U.S.C. §6926) which constitute violations of any requirement of any applicable federally approved state program. As the state of Washington received such authorization in August, 1983, noncompliance with the requirements imposed by the approved Washington program, constitutes a violation of both state and federal requirements.

E. EPA has notified the state of Washington of this action as required under RCRA §3008(a)(2), 42 U.S.C. §6928(a)(2). Ecology is herein joining with EPA to initiate this enforcement action pertaining to any of the violations cited in this Order.

F. On the basis of information received by the Director, much of which is set forth below, Ecology determines that the USDOE, a "person" within the meaning of RCW 70.105.010 has violated (and/or is in violation of) one or more provisions of Chapter 70.105 RCW and the regulations promulgated thereunder.

G. On the basis of information received by the Regional Administrator, much of which is set forth below, EPA hereby determines that the USDOE, a "person" within the meaning of 42 U.S.C. §6903(15) has violated (and/or is in violation of) one or more requirements of RCRA Subtitle C, 42 U.S.C. Chapter 82, Subchapter III and the regulations promulgated thereunder.

II. FINDINGS OF FACT

A. On or about August 14, 1980, USDOE submitted a Notice of Hazardous Waste Activity pursuant to Section 3010 of RCRA, identifying USDOE as a generator, transporter and owner and operator of a Treatment, Storage and/or Disposal Facility ("TSDF"). On or about November 18, 1980, USDOE submitted Part A of its permit application qualifying for interim status pursuant to Section 3005 of RCRA. USDOE's Part A was modified by USDOE on May 30, 1985 (and at four (4) other times not pertinent herein) and submitted to Ecology and EPA on or about June 3, 1985.

B. During the period June 11 through 14, 1985 both EPA and Ecology conducted an inspection of USDOE's facility located at the Hanford Site, Benton County, Richland, Washington. Said inspection by Ecology and EPA was performed to determine the extent to which USDOE was complying with applicable state and federal requirements (i.e., WAC 173-303 and the applicable provisions of 40 C.F.R. Parts 262, 263, and 265).

C. During the June, 1985 Ecology and EPA inspection of USDOE's facility, a number of documents were requested of USDOE pertaining to its dangerous (and hazardous) waste activities. On or about September 30, and October 16, 1985 Ecology and EPA received USDOE's partial responses to said Information Request and said agencies have not yet completed their review and evaluation of the documents. As a result, the observations contained herein are not a comprehensive evaluation of USDOE's compliance with applicable requirements for the management of dangerous wastes (and hazardous wastes). Further enforcement action may ensue upon completion of the review and evaluation of USDOE's complete submittal or any other new information obtained by Ecology and/or EPA.

D. On or about August 19, 1985, Ecology and EPA received from USDOE a document entitled, "Department of Energy - Richland Operations, Hanford Site Dangerous Waste Implementation Plan" ("Implementation Plan"). Said document purports to examine USDOE's compliance with Ecology's regulations as of June 1, 1985.

E. USDOE has had a continuing obligation to comply with the federal hazardous waste management program as administered by EPA and as more recently administered by Ecology under its Dangerous Waste Management Program (post-August, 1983).

F. On or about May 3, 1984 Ecology issued an Order against USDOE (Order No. DE 84-267) ordering USDOE to take immediate action to ensure full compliance with state dangerous waste regulations (i.e., WAC 173-303).

G. On or about December 26, 1984, Ecology issued an Order against USDOE (Order No. DE 84-720) ordering USDOE, inter alia, to submit to Ecology for review and approval a site-wide dangerous waste ground water monitoring Outline and Proposal which would clearly detail the USDOE's plans for compliance with interim status standards pursuant to 40 C.F.R. Part 265, Subpart F. Further, USDOE was to achieve compliance with 40 C.F.R. Part 265, Subpart F by August 1, 1985.

H. On or about April 24, 1984, dangerous (and hazardous) wastes were transported from USDOE's facility to Chem-Security Systems, Inc., a commercial off-site TSDF under manifest numbers 64091 through 64097, inclusively. For each manifest, USDOE's EPA i.d. number was used but the generator was listed as "Rockwell Hanford Operations." Based on information supplied by USDOE, it is the USDOE, not Rockwell Hanford Operations, who is the generator of the manifested wastes. USDOE did not enter its name and mailing address on the seven (7) manifests discussed above in violation of WAC 173-303-180 (and 40 C.F.R. 262.21). Further, an employee of Rockwell Hanford Operations signed each manifest discussed above as the generator of the wastes.

I. On at least two (2) occasions (i.e., January 17, and April 22, 1983) dangerous (and hazardous) wastes were disposed of into the 183-H Solar Evaporation Basins. Said basins were used as evaporation tanks by USDOE, qualifying them as treatment tanks regulated pursuant to WAC 173-303-141. However, USDOE did not include these tanks in its June 3, 1985 or prior Part A Application submittals and therefore, had operated this unit without interim status in violation of WAC 173-303 (and RCRA §3005).

J. USDOE was observed by Ecology and/or EPA personnel, during the June 1985 compliance inspection to accumulate dangerous waste on-site in at least four (4) nondesignated TSDF's (i.e., J.A. Jones Staging Area (3000 area), Hanford Environmental Health Foundation (HEHF) Research Lab., Westinghouse Corporation 340 Staging area and Pacific Northwest Laboratory (PNL) 332 Staging Area) for greater than 90 days in violation of WAC 173-303-200 (and 40 C.F.R. §262.34).

K. Based on documents available to Ecology and/or EPA during the June 1985 compliance inspection, USDOE had not developed facility closure and post-closure plans adequate to meet the requirements of WAC 173-303-400, in violation of said requirements which incorporate by reference 40 C.F.R. Part 265, Subpart G. Specific facility plans reviewed covered the Nonradioactive Dangerous Waste landfill, the Nonradioactive Dangerous Waste Storage facility (2727-S), the 221-T Test facility, the 3718F Alkali Metal Treatment facility, and the 105-DR Large Sodium Fire facility.

L. USDOE has not installed a ground water monitoring well system capable of immediately detecting the release of hazardous waste or hazardous waste constituents from the Dangerous Waste Landfill and does not have a written demonstration, pursuant to the requirements of 40 C.F.R. §265.90(c). These failures constitute violation(s) of WAC 173-303-400(3) (which in this instance incorporates by reference 40 C.F.R. Part 265, Subpart F). Further, USDOE's July 1985 Request for Waiver does not adequately address the requirements of 40 C.F.R. §265.90(c). Specifically, USDOE's waiver demonstration failed to demonstrate a low

potential for hazardous waste or hazardous waste constituents to migrate from the facility via the uppermost aquifer to surface water. In fact, ground water beneath the Dangerous Waste landfill migrates directly to the Columbia River and therefore USDOE cannot meet the necessary requirements for a waiver and is not in compliance with 40 C.F.R. §265.90(b).

M. USDOE has failed to install, operate and maintain a ground water monitoring system in compliance with 40 C.F.R. §265.90(d) at its 183-H Solar Evaporation Basins. Nor has USDOE installed, operated or maintained a ground water monitoring system in compliance with 40 C.F.R. §265.91 at these land disposal units. Such failure is in violation of the requirements of WAC 173-303-400(3) which incorporate by reference 40 C.F.R., Part 265, Subpart F.

N. USDOE has had a continuing obligation to comply with the federal hazardous waste management program as administered by EPA and the more recently authorized (August 1983) Ecology Dangerous Waste Management Program.

III. CONCLUSIONS OF LAW

Considering the matters set forth above, USDOE has violated WAC 173-303 and has also violated RCRA Subtitle C, 42 U.S.C. Chapter 82, Subchapter III. Accordingly, the issuance of this Order is authorized by RCRA Section 3008(a), 42 U.S.C. §6928(a) and under state law by RCW 70.105.095.

IV. REGULATORY ORDER

Based on the foregoing determinations, it is hereby **COMMANDED AND DIRECTED AS FOLLOWS:**

A. Within 45 days of receipt of this Order, USDOE shall submit to Ecology and EPA a Compliance Plan detailing all planned USDOE actions designed to achieve compliance with 40 C.F.R. Part 265, Subpart F for each land disposal unit subject to ground water monitoring, including the Dangerous Waste Landfill. Further, for areas such as the 183-H Solar Evaporation Basins where a release of hazardous waste and/or hazardous waste constituents has occurred or is occurring from a hazardous waste unit, USDOE must develop, submit to both Ecology and EPA, and implement as soon as technically practicable an Assessment Monitoring Plan in accordance with the requirements of 40 C.F.R. §265.93(d)(3)-(5). Said plans shall call for the installation, sampling and analysis of monitoring wells so spaced vertically and horizontally as to determine the rate and extent of migration and the concentrations of hazardous waste and hazardous waste constituents in the ground water in accordance with 40 C.F.R. Part 265, Subpart F. Compliance with 40 C.F.R. Part 265, Subpart F at all above referenced units shall be achieved as soon as practicable but no later than 120 days of receipt of this order.

B. USDOE shall, immediately upon receipt of this Order, cease accepting dangerous waste in the Nonradioactive Dangerous Waste Landfill. This

prohibition shall continue in effect until compliance with 40 C.F.R. Part 265 Subpart F, as noted within paragraph A above, has been achieved and recognized by Ecology and EPA.

C. Within 120 days of receipt of this order, USDOE shall submit to Ecology and EPA interim status facility closure and post closure plans meeting the requirements of WAC 173-303-400 which incorporates by reference 40 C.F.R. Part 265, Subpart G. Said plans shall cover the Nonradioactive Dangerous Waste landfill, the Nonradioactive Dangerous Waste Storage facilities (2727-S and 616), the 221-T Test facility, the 3718-F Alkali Metal Treatment facility, the 105-DR Large Sodium Fire facility and the 1983-H Solar Evaporation Basins.

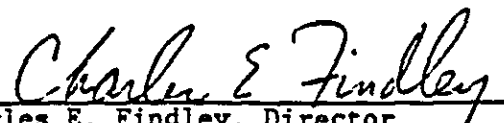
D. Immediately upon receipt of this Order, USDOE shall institute procedures to insure that on-site generator operations do not store wastes outside permitted storage areas for periods of time greater than 90 days. Within 30 days of receipt of this Order, USDOE shall submit a report to both Ecology and EPA describing those procedures and methods followed by USDOE to assure continued compliance with WAC 173-303-200 and 40 C.F.R. §262.34.

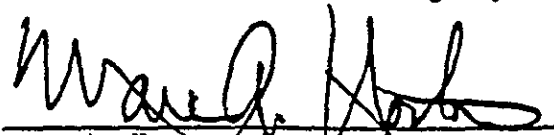
E. Immediately on receipt of this order, USDOE shall fully comply with the requirements of 40 C.F.R. Part 262, Subpart B (manifest requirements) and the applicable provisions of WAC 173-303-180 and within 30 days shall submit a report to both Ecology and EPA describing the procedures and methods being followed to assure continued compliance.

F. Any appeal of this order shall be brought as per the terms of the attached Notice of Proceedings which is hereby incorporated by reference in its entirety into this document.

All plans, reports, or other submissions required by this Order shall be submitted in duplicate to Mr. Kenneth D. Feigner, Chief, Waste Management Branch, M/S 533, Environmental Protection Agency, 1200 Sixth Avenue, Seattle, Washington 98101 and to Mr. Richard A. Burkhalter, Supervisor, Industrial Section, Washington Department of Ecology, Mail Stop PV-11, Olympia, Washington 98504.

ISSUED at Seattle this 5th day of Feb, 1986.


Charles E. Findley, Director
Hazardous Waste Division
Environmental Protection Agency


Marc A. Horton, Deputy Director
Office of Operations and Enforcement
Washington Department of Ecology

ACCEPTANCE OF SERVICE

CLERK'S STAMP

STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY

State of Washington, Department
of Ecology,

Complainant,

v.

United States Department of Energy,
Richland Operations Office,
WA789000896,

Respondent.

ECOLOGY No. DE 86-133
PCHB No. 86-44CONSENT AGREEMENT AND
COMPLIANCE ORDERINTRODUCTION

A joint regulatory Compliance Order was issued against respondent United States Department of Energy on February 5, 1986, by the State Department of Ecology (Ecology) and the Environmental Protection Agency (EPA). The Regulatory Order alleged violations of the Revised Code of Washington, chapter 70.105 et seq. (the Ecology Hazardous Waste Management Program) and Subtitle C of the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. §§ 6912 et seq., and regulations found at chapter 173-303, Washington Administrative Code (WAC), and 40 CFR Parts 260 through 265. The Order compelled the respondent to take actions with respect to its dangerous and hazardous waste activities at the respondent's

KENNETH G. EIKENBERRY, ATTORNEY GENERAL

Kathleen D. Mix

Assistant Attorney General

Mail Stop PV-11

Olympia, Wa. 206/459-6800

98504

Telephone

Richland, Washington operation, known as the Hanford Nuclear Reservation.

The parties to this agreement and order have agreed that settlement of this action without further litigation is in the public interest and that entry of this Consent Agreement and Compliance Order is the most appropriate means of resolving this matter. Accordingly, the following Consent Agreement and Compliance Order is hereby executed and agreed to by the parties set forth below.

PARTIES

1. The State of Washington Department of Ecology ("Ecology") is the complainant in this action. The United States Department of Energy ("USDOE") is the respondent in this action. Both these parties are signatories to this Consent Agreement and Compliance Order.

JURISDICTION

2. On February 5, 1986 Ecology issued a regulatory order to USDOE pursuant to chapter 70.105 RCW. Ecology has jurisdiction to enter into this consent agreement and compliance order pursuant to chapter 70.105 RCW and specifically RCW 70.105.095.

3. USDOE agrees to undertake all actions required by the terms and conditions of this Consent Agreement and Compliance Order. USDOE consents to and will not contest the jurisdiction of Ecology regarding entry of this Consent Agreement and Compliance Order.

1 4. All documents submitted hereunder shall be submitted
2 both to Ecology and to EPA.

3 5. The provisions of this Consent Agreement and Compliance
4 Order shall be binding on the USDOE whether activities are
5 performed by its employees or contractors.

6 FINDINGS OF FACT

7 Ecology makes the following Findings of Fact:

8 6. The USDOE is a person, as defined in RCW 70.105.101.

9 7. On or about August 14, 1980, USDOE submitted a Notice
10 of Hazardous Waste Activity pursuant to Section 3010 of RCRA.
11 This notice identified USDOE as the owner and operator of a treat-
12 ment, storage and/or disposal facility for hazardous wastes
13 ("TSDF"). The notice also identified USDOE as a generator and
14 transporter of hazardous wastes. On or about November 18, 1980,
15 USDOE submitted Part A of its permit application, which qualified
16 USDOE for interim status for a number of hazardous waste activi-
17 ties pursuant to Section 3005(e) of RCRA. USDOE's Part A applica-
18 tion was modified on several occasions prior to this Consent Agree-
19 ment and Compliance Order, including submissions dated June 3,
20 1985 and September 27, 1985 (further revised in November, 1985).
1 Hazardous waste facilities identified in such Part A permit appli-
2 cations which are now subject to interim status regulation include
3 the following:

4 Nonradioactive dangerous waste landfill
5 300 area process trenches
6 200 areas - low level radioactive burial
7 grounds and retrievable storage facilities

1 183-H - solar evaporation basins
2 2727S - nonradioactive dangerous waste
transshipment facility
3 616 - nonradioactive dangerous waste
transshipment facility
4 3718F - alkali metal treatment and storage
facility
5 437 - maintenance and storage facility
6 221T - contaminated systems test facility
7 105DR - large sodium fire facility
8 324 - sodium removal plant
300 area solvent evaporation unit
Shock sensitive or potentially explosive
chemical detonation areas.

9 8. On May 3, 1984, Ecology ordered USDOE to take immediate
10 action to ensure full compliance with state dangerous waste regula-
11 tions (Order No. DE 84-267). On December 26, 1984, Ecology ordered
12 USDOE, inter alia, to submit to Ecology for review and approval a
13 site-wide dangerous waste ground-water monitoring outline and
14 proposal which would detail USDOE's plan for compliance with
15 interim status ground-water standards pursuant to ch. 173-303 WAC
16 and 40 CFR Part 265, Subpart F. Further, Ecology ordered that
17 compliance with these requirements was to be achieved by August 1,
18 1985.

19 9. On June 11 through 14, 1985, Ecology and EPA conducted
20 an inspection of USDOE's facility located at the Hanford Nuclear
21 Reservation, Benton County, Richland, Washington. In addition,
22 on or about August 19, 1985, Ecology and EPA received from USDOE
23 a document entitled "Department of Energy--Richland Operations,
24 Hanford Site Dangerous Waste Implementation Plan ("Implementation
25 Plan"), which purports to examine USDOE's compliance with applic-
26 able regulations as of June 1, 1985.

27 CONSENT AGREEMENT AND
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1 10. Based upon the June 1985 inspection, subsequent failure
2 to achieve compliance with regulatory requirements by USDOE,
3 review of Part A permit applications, and review of other material
4 submitted to date by USDOE, the following violations have occurred
5 at the USDOE Hanford facility:

6 A. Seven manifests, numbered 64091 through 64097,
7 prepared for the shipment of hazardous wastes from the Hanford
8 facility to Chem-Security Systems, Inc., an off-site TSDF, did
9 not bear the name, address, or signature of USDOE, in violation
10 of WAC 173-303-180 (and 40 CFR 262.21).

11 B. Hazardous waste was stored for over 90 days in
12 four nondesignated TSDFs (the J.A. Jones Staging Area, Hanford
13 Environmental Health Foundation laboratory, Westinghouse Hanford
14 Company, 340 Staging Area, and the Pacific Northwest Laboratory
15 332 Staging Area), in violation of WAC 173-303-200 (and 40 CFR
16 § 262.34).

17 C. Facility-closure and post-closure plans available
18 during the June 1985 inspection were not adequate to meet the
19 requirements of WAC 173-303-400 (and 40 CFR Part 265, Subpart G).
20 Respondent, in correspondence dated April 1, 1986, has now identi-
21 fied that its closure and post-closure plans available during the
22 June 1985 inspection are superseded and replaced by those plans
23 contained in respondent's most recent Part B permit application
24 submittal, currently under review by EPA and Ecology.

25 D. Dangerous (and hazardous) wastes were disposed of
26 in the 183-H Solar Evaporation Basins on at least two occasions,

1 January 17 and April 22, 1983. Thus, the 183-H Solar Evaporation
2 Basins are a regulated unit within the scope of RCRA and
3 ch. 70.105 RCW. The units comprising the basin were used as
4 evaporation tanks by USDOE, qualifying them as storage and treat-
5 ment tanks pursuant to WAC 173-303-141. USDOE did not include
6 these basins in its June 3, 1985, or prior Part A applications.
7 Therefore, the basins had operated as a hazardous waste TSDF with-
8 out interim status, in violation of ch. 70.105 RCW, ch. 173-303
9 WAC and RCRA § 3005. The units are currently listed on USDOE's
10 most recent Part A permit application. In addition, hazardous
11 wastes and hazardous waste constituents have been released into
12 the soil and ground water at this site. Such release constitutes
13 the land disposal of hazardous waste, and subjects the basins to
14 ground-water regulations found at 40 CFR Part 265, Subpart F.

15 E. Ground-water monitoring wells at the 183-H Solar
16 Evaporation Basins were inadequate for alternate ground-water
17 monitoring, as described in 40 CFR § 265.90(d). Ground water
18 monitoring wells at the 300 Area Process Trenches, which are land
19 disposal units, were inadequate for alternate ground-water moni-
20 toring as described in 40 CFR § 265.90(d). No ground-water moni-
21 toring wells existed at the Nonradioactive Dangerous Waste Land-
22 fill, and the written ground-water monitoring waiver demonstration
23 has been determined to be invalid for this land disposal unit.
24 Hazardous waste ground-water monitoring systems in compliance
25 with WAC 173-303-400(e), which incorporates 40 CFR Part 265,
26

Subpart F, have not been implemented at 200 area mixed waste burial grounds and retrievable storage areas.

DETERMINATION

11. On June 3, 1985, and prior to issuance of the Regulatory Order, USDOE was in violation of RCRA and ch. 70.105 RCW and accompanying regulations.

AGREEMENT

12. Ecology has jurisdiction to enter into and enforce this Consent Agreement and Compliance Order. Nothing in the Findings of Fact or the Determination made herein shall be construed as an admission of fact or law, an estoppel or waiver of defenses by USDOE nor shall anything elsewhere in this agreement be considered an admission of fact. USDOE neither admits nor denies the Findings of Fact or Determination stated herein. However, in order to amicably resolve this matter and to avoid further litigation on this matter, USDOE agrees to comply with all actions described in the Compliance Order. USDOE has a duty to comply with applicable requirements of RCRA and ch. 70.105 RCW, and all accompanying regulations.

USDOE agrees to the dismissal of its appeal of the Regulatory Order before the Pollution Control Hearings Board (PCHB No. 86-44). USDOE recognizes that it is the position of Ecology that failure to comply with the final order may subject USDOE to penalties of up to \$10,000 per day to Ecology and the State of Washington, pursuant to RCW 70.105.095. USDOE reserves any defenses it may have to such penalty assertion by Ecology.

CONSENT AGREEMENT AND
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1 As between Ecology and USDOE this Consent Agreement and Final
2 Order supersedes the Joint Regulatory Order issued by Ecology and
3 EPA on February 5, 1986.

4 FINAL ORDER

5 13. Manifest Requirements: USDOE shall comply with all
6 described procedures for the completion of manifests to ensure full
7 compliance with 40 CFR Part 262, Subpart B, and WAC 173-303-180.

8 14. Storage Requirements: USDOE shall comply with the
9 90-day storage requirements of 40 CFR § 262.34 and WAC 173-303-200
10 for the off-site disposal of hazardous waste from its generator-
11 accumulation areas. USDOE shall remove all dangerous (and hazard-
12 ous) wastes stored for more than 90 days from nondesignated TSDFs
13 by July 14, 1986. USDOE shall submit a report demonstrating com-
14 pliance with this Section by July 31, 1986. The provisions of
15 this section do not address other regulations applicable to
16 hazardous waste generators.

17 15. Closure and Post-Closure Plans: Within sixty (60) days
18 of receipt of written comments from Ecology on respondent's clo-
19 sure and post-closure plans, respondent shall modify those plans to
20 fully address the comments, and otherwise comply with requirements
21 of 40 CFR Part 265, Subpart G. This requirement applies to the
22 following seven facilities: nonradioactive dangerous waste land-
23 fill, 2727S and 616 - nonradioactive dangerous waste transshipment
24 facilities, 221T - contaminated systems test facility, 3718F -
25 alkali metal treatment and storage facility, 105DR - large sodium
26

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1 fire facility and 183-H - solar evaporation basins. Such modified
2 plans shall be submitted to Ecology for final review and approval.
3 Any deficiencies in these modified plans noted by Ecology in the
4 final submittal shall be cured (and the plans resubmitted to
5 Ecology) within thirty (30) days. Such modified plans shall
6 become the approved closure plans under the terms of this agree-
7 ment.

8 16. Landfill Utilization: USDOE shall not accept hazardous
9 waste at the nonradioactive dangerous waste landfill, the 183-H
10 Solar Evaporation Units or 300 Area Process Trenches, until such
11 time as Ecology recognizes respondent's compliance with 40 CFR
12 Part 265, Subpart F, for the units. The issue of the unit's com-
13 pliance with regulatory requirements shall be resolved through
14 formal agreement between USDOE and Ecology. The issuance of a
15 Part B permit would be one example of such formal agreement.

16 17. Ground-Water Monitoring:

17 A. Affected Units: USDOE shall come into compliance
18 with WAC 173-303-400(3) and 40 CFR Part 265, Subpart F (interim
19 status ground-water monitoring requirements), for the following
20 units as soon as is reasonably and practically possible, but no
21 later than the schedules set forth below: Nonradioactive Dangerous
22 Waste Landfill; 183-H Solar Evaporation Units; 300 Area Process
23 Trenches; and 200 east and 200 west mixed waste burial grounds
24 and retrievable storage areas.

25 B. Compliance Plans: USDOE shall immediately initiate
26 efforts to comply with ground water monitoring requirements at the

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1 identified units through development of compliance plans and initia-
2 tion of necessary procurement as presented to Ecology and EPA at
3 meetings on March 5, April 15, May 5, and June 11, 1986. USDOE
4 shall provide EPA and Ecology with copies of Requests for Propo-
5 sals issued in relation to this Final Order. Development of
6 ground-water monitoring systems shall adhere to the following:

7 (1) Compliance Plans: Contents: A compliance
8 plan for each unit shall be developed and shall include at a
9 minimum, the following:

0 (a) A narrative description of all work
1 performed to date, to comply with 40 CFR Part 265, Subpart F
2 ("interim status ground-water monitoring requirements").

3 (b) A copy of all boring logs, well
4 construction location data, results of sampling and analysis, and
5 other hydrogeological data gathered since June 1985, to comply
6 with interim status ground-water monitoring requirements.

7 (c) A discussion on the need for further
8 hydrogeological investigation at the unit as related to the
9 requirements of the hazardous waste regulations.

0 (d) An outline and schedule of additional
1 work planned to comply with interim status ground-water monitoring
2 requirements, such that compliance is achieved by the date
3 indicated in Section 18(C), below.

4 (e) For those units subject to alternate or
5 assessment ground-water monitoring, a discussion of the method of

determining the rate and extent of contamination. Compliance plans shall be submitted according to schedules indicated in Section C, supra.

(2) Compliance Plans: Modifications Prior to Implementation: Ecology may submit written comments on each compliance plan received in the event such plan is inadequate or unacceptable. These comments and proposed modifications may include additions or changes to the Outline and Schedule for Additional Work section of the plan. USDOE shall modify each plan, within thirty (30) days of receipt of comments specific to each compliance plan, to fully address these comments and submit such modified plan to Ecology and EPA prior to performance of scheduled work, to the extent practicable. USDOE shall implement the modified compliance plans according to terms and schedules as set forth in the modified compliance plans.

(3) Compliance Plans: Reporting: For each compliance plan, USDOE shall submit a quarterly report on the status of USDOE's implementation of the outline and schedule for additional work until the plan is fully implemented. These reports shall describe all work done pursuant to this Agreement and Order in the past quarter, and shall present a compilation of all raw data obtained pursuant to this Agreement and Order in the previous quarter. Ecology, in reviewing the quarterly report (which shall be submitted by the 25th day of each subsequent quarter), or any other report submitted by USDOE, may comment on

1 the report in writing and request modification of the applicable
2 compliance plan including additions and/or alterations to the
3 outline and schedule for additional work. Upon receipt of com-
4 ments, USDOE shall modify said compliance plan per the terms and
5 procedures set forth in paragraph 2 above. Ecology reserves the
6 right to request additional information at any time regarding
7 compliance with the terms of this agreement.

8 C. Implementation of Compliance Plans: Specific Units:

9 (1) Nonradioactive Dangerous Waste Landfill: The
0 March 1986 compliance plan submitted to EPA and Ecology for the
1 nonradioactive dangerous waste landfill satisfies the requirement
2 to submit a ground-water monitoring compliance plan for this unit,
3 subject to supplementation at the request of Ecology. A ground
4 water monitoring system based upon such plan shall be installed by
5 USDOE. A ground-water monitoring system adequate to comply with
6 interim status standards shall be installed no later than
7 December 31, 1986.

8 (2) 183-H Solar Evaporation Basins: Within
9 forty-five (45) days of the effective date of this Order USDOE
0 shall submit a compliance plan for the 183-H Solar Evaporation
1 Basins. A ground water monitoring system based upon such plan
2 shall be installed by USDOE. Phase II of the ground water moni-
3 toring plan, as presented to EPA and Ecology (as modified),
4 designed to comply with interim status standards shall be in place
5 no later than December 31, 1986. Phase II shall include those

1 wells identified in the Revised Phase II Ground Water Monitoring
2 Plan presented to EPA and Ecology on June 11, 1986. Phase III of
3 the ground-water monitoring system shall be installed no later
4 than September 30, 1987, to complete compliance with interim
5 status standards.

6 (3) 300 Area Process Trenches: Within sixty
7 (60) days of the effective date of this Order USDOE shall submit a
8 compliance plan for the 300 Area Process Trenches. A ground water
9 monitoring system based upon such plan shall be installed by
10 USDOE. A ground-water monitoring system adequate to meet interim
11 status standards shall be in place no later than December 31,
12 1986.

13 (4) 200 Area Mixed Waste Burial Grounds and
14 Retrievable Storage Facilities:

15 (a) Within 60 days of the effective date of
16 the Order USDOE shall submit an outline of a proposed compliance
17 plan for the 200 East and 200 West mixed waste burial grounds and
18 retrievable storage facilities. Regulated units within those
19 facilities are identified by USDOE as follows: 218-W-3A, 218-W-3Aa,
20 218-W-4C, 218-E-10, and 218-E-12B.

21 USDOE has determined that radioactive mixed waste was not
22 disposed of in sites 218-W-2A and 218-C-9 and will withdraw its
23 permit application for these two sites. Other units identified
24 in the Part B permit application which may be utilized in the
25 future, but which have not been used to date, shall not be
26 subject to this Order.

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1 Within 120 days of the effective date of this Order USDOE
2 shall submit a ground-water monitoring compliance plan for sites
3 218-W-3A, 218-W-3AE, 218-W-4C, 218-E-10, and 218-E-12B, treating
4 these sites as four waste management areas. An initial ground-
5 water monitoring system consisting of not more than 35 wells, nor
6 more than 11,000 total feet of well drilled, shall be installed
7 around these areas, no later than November 30, 1987. Upon comple-
8 tion of that system a revised ground-water monitoring compliance
9 plan shall be submitted which will assess the adequacy of the
10 installed system and identify the additional activities, if any,
11 required to achieve full compliance with RCRA and ch. 70.105 RCW.
12 If analysis of data from the initial system indicates additional
13 wells are required in the 200 areas, they shall be installed in
14 future phases to be mutually agreed upon by the parties.

15 (b) Nothing contained in this Section [(17)
16 (C)(4)] shall be considered as an admission of fact or law by
17 USDOE as to the ability of Ecology to regulate the wastes identi-
18 fied in this Section. USDOE desires to comply with applicable
19 state and federal regulations for ground-water monitoring in
20 the 200 area mixed waste burial grounds and retrievable storage
21 areas as a matter of comity. This shall not, however, preclude
22 Ecology from enforcing this agreement and the terms of this
23 section.

24 D. Compliance Plans: Modification After Implementation:

25 (1) If, as each compliance plan, identified in
26 paragraphs 17(C)(1) through (4) above, is implemented, new informa-

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tion that was not reasonably available at the time of presentation of the compliance plan becomes available to USDOE which indicates the plan will not result in compliance with applicable ground-water monitoring regulations by the specified dates, that information shall be brought immediately to the attention of Ecology. After submission and evaluation by Ecology, an alternative plan and schedule may be negotiated by the parties based on such new information.

(2) Ecology may require modification or expansion of ground-water monitoring systems installed pursuant to this agreement, should such installed systems fail to achieve compliance with 40 CFR 265 Subpart F.

18. In the event any reviews or circumstances demonstrate a need for extension of time for any submission or compliance date set forth above in paragraph 17, it may be modified by the written agreement of the parties. If agreement on a revised schedule cannot be reached, or if any party believes that a revised schedule is not justified, the parties shall resolve any disagreement over the revised schedule through the conflict resolution procedures of this agreement.

19. Conflict Resolution: In the event of a dispute arising between the parties concerning the implementation of any of the terms of this Agreement, the parties will attempt to resolve the differences. If the differences cannot be resolved by the two parties in a timely manner, USDOE will expeditiously prepare a brief issue(s) paper detailing the circumstances of the dispute

1 and present the paper to Ecology's project manager. If a resolu-
2 tion is not reached within two weeks of the receipt of this issue
3 paper, the parties will hold a mid-level management meeting to
4 resolve the issues in dispute. If the dispute is still unresolved,
5 higher management levels and respective legal counsels for the
6 parties will be consulted.


7 Should a dispute involving Ecology and USDOE not be resolved
8 by the foregoing procedure, an action may be taken by Ecology to
9 the extent authorized by law to enforce its position on this
10 agreement in an appropriate forum.

11 20. Compliance with Permits and Laws: Compliance with the
12 terms and conditions of this Order shall not in any way be con-
13 strued to relieve USDOE of its obligations to comply with the
14 terms and conditions of any permit, or any applicable federal,
15 state or local law. All actions taken pursuant to this Agreement
16 and Order shall be those authorized by RCRA and ch. 70.105 RCW, as
17 applicable.


18 21. Availability of Funding: USDOE's commitments under
19 this Agreement are subject to the availability of appropriated
20 funds for such purpose. However, should USDOE fail to comply
21 with the terms herein based on a lack of appropriated funds,
22 Ecology reserves all rights to initiate action to require compli-
23 ance with RCRA and ch. 70.105 RCW, including the provisions of
24 § 6001 of RCRA (42 U.S.C. § 6961) at those facilities on the
25 Hanford site subject to such requirements, including those covered
26 by this Agreement and Order, to the extent permitted by law.

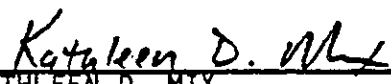
22. Submission of Documents: All submittals required under this Order shall be submitted in duplicate to Mr. Richard A. Burkhalter, Supervisor, Industrial Section, Washington Department of Ecology, M/S PV-11, Olympia, Washington, 98504. Where provided in this Agreement and Order, duplicate copies shall be provided to Mr. Kenneth D. Feigner, Chief, Waste Management Branch, M/S 533, Environmental Protection Agency, 1200 Sixth Avenue, Seattle, WA 98101.

IT IS SO AGREED AND ORDERED, effective this 1st day of October, 1986.


MARC A. HORTON, Deputy Director
Office of Operations and Enforcement
State of Washington Department of
Ecology

STIPULATED AND AGREED FOR ISSUANCE


L. R. Fitzsimmons, Assistant Manager
Environment, Safety and Security
United States Department
of Energy


KATHLEEN D. MIX
Assistant Attorney General
Department of Ecology
State of Washington

Approved as to form.

CONSENT AGREEMENT AND
COMPLIANCE ORDER

ANDREA BEATTY RINKER
Director



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Mail Stop PV-11 • Olympia, Washington 98504-8711 • (206) 459-6000

OCT 30 1987

CERTIFIED MAIL

United States Department of Energy
Richland Operations Office
P. O. Box 550
Richland, WA 99352

Gentlemen:

Enclosed is Order No. DE 87-295. All correspondence relating to this document should be directed to the enforcement officer. If you have any questions concerning the content of the document, please call Julie Atwood, telephone (206) 459-6034.

A form entitled "Acknowledgment of Service" is also enclosed. Please sign this form and return it to this office.

This order is issued under the provisions of RCW 70.105.095. Any person feeling aggrieved by this order may obtain review thereof by application within 30 days of receipt of the order, to the Pollution Control Hearings Board, Mail Stop PY-21, Olympia, WA 98504-8921, with a copy to the Director, Department of Ecology, Mail Stop PV-11, Olympia, WA 98504-8711, pursuant to the provisions of Chapter 43.21B RCW and the rules and regulations adopted thereunder.

Sincerely,

A handwritten signature in cursive script that reads "Jon Neel".

Jon Neel
Enforcement Officer

JN:jv

Enclosures

DEPARTMENT OF ECOLOGY

IN THE MATTER OF THE COMPLIANCE BY)
 UNITED STATES DEPARTMENT OF ENERGY)
 with Chapter 70.105 and 90.48 RCW)
 and the Rules and Regulations of the)
 Department of Ecology)

ORDER
 No. DE 87-295

To: United States Department of Energy
 Richland Operations Office
 P. O. Box 550
 Richland, WA 99352

Chapter 173-303 WAC, entitled "Dangerous Waste Regulations," designates those solid wastes which are dangerous or extremely hazardous to the public health and environment; and provides for surveillance and monitoring of dangerous wastes until they are detoxified, reclaimed, neutralized, or disposed of safely.

RCW 90.48.020 defines underground waters as waters of the state. RCW 90.48.080 provides that it shall be unlawful for any person to throw, drain, run, or otherwise discharge into any of the waters of this state, or to cause, permit or suffer to be thrown, run, drained, allowed to seep or otherwise discharge into such waters any organic or inorganic matter that shall cause or tend to cause pollution of such water s according to the determination of the Director.

The United States Department of Energy is required to follow Chapter 173-303 WAC and RCW 90.48. This order is based on the following facts:

- On August 30, 1987, 16,800 gallons of ammonium hydroxide process scrubber condensate (ASD) was discharged to the 216-A-36B crib as a result of fuel decladding at Purex. Ammonium hydroxide is designated as a dangerous waste pursuant to Chapter 173-303-070 WAC.
- The practice of discharging ASD waste to the 216-A-36B crib occurs on a batch basis of approximately 16,000 gallons each time there is a fuel decladding. Since 1986, 131 full charge fuel decladdings have taken place.
- On September 6, 1987, a further release of 660 gallons of ASD waste to the 216-A-36B crib resulted during a transfer of a heel to the concentrator.

Based on the preceding information and the review and evaluation of records, the department has determined that this facility owned by United States Department of Energy (USDOE) and operated by Westinghouse Corporation (WHC) is in violation of the following sections of WAC 173-303 and RCW 90.48:

Order No. DE 87-295
Page 2

WAC 173-303-141 Treatment, Storage, or Disposal of Dangerous Waste

The discharge of hazardous wastes to the 216-A-36B crib has been routine and unreported to the Department prior to notification September 1, 1987. The 216-A-36B crib is not permitted pursuant to WAC 173-303-805, Interim Status Permits or WAC 173-303-806, Final Status Permits. The disposal of hazardous waste into a facility which does not have a permit pursuant to WAC 173-303-805 or WAC 173-303-806 is a violation of WAC 173-303-141.

WAC 173-303-400 Interim Status Facility Standards

WAC 173-303-400 incorporates by reference 40 CFR 265 Subparts F through R.

40 CFR 265.314 Special Requirements for Bulk and Containerized Liquids

40 CFR 265.314 prohibits the placement of non-containerized liquid waste into landfills. The 216-A-36B crib is defined as a landfill pursuant to WAC 173-303 and receives non-containerized liquid. This is a violation of 40 CFR 265.314.

RCW 90.48.080 Unlawful Discharge Into Waters of the State

The discharge of hazardous waste into the 216-A-36B has resulted in the disposal of contaminants to waters of the state. This is a violation of RCW 90.48.080.

RCW 70.105.095 reads in part: "Whenever on the basis of any information the department determines that a person has violated or is about to violate any provision of this chapter, the department may issue an order requiring compliance either immediately or within a specified period of time."

RCW 90.48.120 reads in part: "Whenever, in the opinion of the department, any person shall violate or is about to violate the provisions of this chapter, or fails to control the polluting content of waste discharged or to be discharged into any waters of the state, the department shall notify such person of its determination by registered mail."

In view of the foregoing and in accordance with the provisions of RCW 70.105.095 and 90.48.120.

Order No. DE 87-295

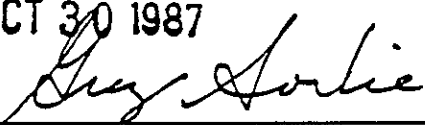
Page 3

IT IS ORDERED THAT United State Department of Energy shall, upon receipt of this Order, take appropriate action in accordance with the following instructions:

1. Immediately cease discharges to the 216-A-36B crib facility.
2. By February 2, 1988, USDOE shall identify and report to the department all other hazardous and non-hazardous wastes that have been discharged to the 216-A-36B crib. This report must characterize these wastes and provide information including waste constituents, concentrations, volumes, frequency of discharges and dates of releases. Formal waste characterization pursuant to Chapter 173-303-070 shall also be conducted.
3. By February 2, 1988, USDOE shall submit to the department, a Hazardous Waste Part A Permit application in accordance with 173-303-805.
4. By February 2, 1988, comply with all applicable requirements of chapter 173-303 WAC, except for 40 CFR Part 265 Subpart F. Compliance with 40 CFR part 265 Subpart F shall take place no later than June 1, 1987.
5. By February 2, 1988, USDOE shall develop and submit to Ecology, engineering studies and designs which will preclude all discharges to the 216-A-36B crib.

DATED at Olympia, Washington

OCT 30 1987



Greg Sorlie
Program Manager
Central Operations

DEPARTMENT OF ECOLOGY

IN THE MATTER OF COMPLIANCE)
BY UNITED STATES DEPARTMENT OF ENERGY)
)

ACKNOWLEDGEMENT OF SERVICE
No. DE 87-295

To: Department of Ecology
State of Washington
Olympia, Washington 98504-8711
Attention: Enforcement Officer

Receipt is acknowledged of Order No. DE 87-295.

DATED this _____ day of _____, _____.

(Signature)

(Title)



COMMITMENT CONTROL FOR 8702341	
ASSIGNED TO: DWM	
DISTRIBUTION PRES RAM	VPDP GCO

Department of Energy

Richland Operations Office
P.O. Box 550
Richland, Washington 99352

001168

8702341

NOV 30 1987

SA Wiegman

ESS
CPD

Mr. Greg Sorlie, Program Manager
Central Operations
State of Washington Department of Ecology
Olympia, Washington 98504

Dear Mr. Sorlie:

WASHINGTON DEPARTMENT OF ECOLOGY COMPLIANCE ORDER DE87-295 FOR
THE 216-A-36B CRIB

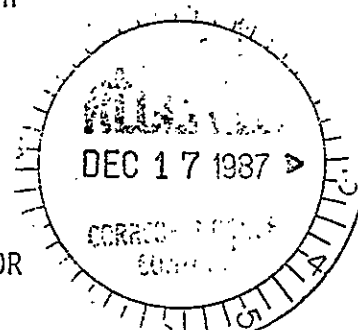
On November 2, 1987, we received your Compliance Order DE87-295 concerning the August 1987 discharge of hazardous material in the ammonia scrubber distillate (ASD) to the 216-A-36B crib in the 200 East Area. In summary, you requested:

1. Immediately cease discharges to the 216-A-36B crib facility.
2. By February 2, 1988, the U.S. Department of Energy (USDOE) shall identify and report to the department all other hazardous and non-hazardous wastes that have been discharged to the 216-A-36B crib. This report must characterize these wastes and provide information including waste constituents, concentrations, volumes, frequency of discharges and dates of releases. Formal waste characterization pursuant to Chapter 173-303-070 shall also be conducted.
3. By February 2, 1988, USDOE shall submit to the department, a Hazardous Waste Part A Permit application in accordance with 173-303-805.
4. By February 2, 1988, comply with all applicable requirements of chapter 173-303 WAC, except for 40 CFR Part 265 Subpart F. Compliance with 40 CFR Part 265 Subpart F shall take place no later than June 1, 1987 [sic].
5. By February 2, 1988, USDOE shall develop and submit to Ecology, engineering studies and designs which will preclude all discharges to the 216-A-36B crib.

RECEIVED
R.E. LERCH

DEC 21 1987

ACTION _____
COPIES _____
ROUTE _____
FILE _____



**Department of Energy**

Richland Operations Office
P.O. Box 550
Richland, Washington 99352

NOV 30 1987

Mr. Greg Sorlie, Program Manager
Central Operations
State of Washington Department of Ecology
Olympia, Washington 98504

Dear Mr. Sorlie:

WASHINGTON DEPARTMENT OF ECOLOGY COMPLIANCE ORDER DE87-295 FOR
THE 216-A-36B CRIB

On November 2, 1987, we received your Compliance Order DE87-295 concerning the August 1987 discharge of hazardous material in the ammonia scrubber distillate (ASD) to the 216-A-36B crib in the 200 East Area. In summary, you requested:

1. Immediately cease discharges to the 216-A-36B crib facility.
2. By February 2, 1988, the U.S. Department of Energy (USD OE) shall identify and report to the department all other hazardous and non-hazardous wastes that have been discharged to the 216-A-36B crib. This report must characterize these wastes and provide information including waste constituents, concentrations, volumes, frequency of discharges and dates of releases. Formal waste characterization pursuant to Chapter 173-303-070 shall also be conducted.
3. By February 2, 1988, USD OE shall submit to the department, a Hazardous Waste Part A Permit application in accordance with 173-303-805.
4. By February 2, 1988, comply with all applicable requirements of chapter 173-303 WAC, except for 40 CFR Part 265 Subpart F. Compliance with 40 CFR Part 265 Subpart F shall take place no later than June 1, 1987 [sic].
5. By February 2, 1988, USD OE shall develop and submit to Ecology, engineering studies and designs which will preclude all discharges to the 216-A-36B crib.

G. Sorlie

Page 2

In response to your Compliance Order, the U.S. Department of Energy's Richland Operations Office (DOE-RL) and Westinghouse Hanford Company (WHC) have:

1. Discontinued prior to issuance of the compliance order the discharge of liquids to the A-36B crib;
2. Determined to provide Ecology by February 2, 1988, with the requested waste information based on all available documentation regarding past discharges to the A-36B crib;
3. With regard to the requests for a Part A Permit application and for compliance with WAC 173-303 requirements, we are reviewing the details of how such requests apply to the A-36B crib. We expect to have questions as to these matters and accordingly would like to arrange a meeting with the appropriate Ecology personnel.
4. The engineering studies and designs which will be implemented to prevent waste discharges to the 216-A36B crib will be provided to Ecology by February 2, 1988.

As part of our program for environmental compliance, in June 1987 we initiated a detailed evaluation including flowsheet analyses of our facility discharges to determine their compliance with applicable State regulations. Previous sampling programs at PUREX had indicated that discharges to the A-36B crib were well below dangerous waste levels. However, as part of our detailed flowsheet analyses, we determined that the particular PUREX waste streams entering the crib could contain higher than acceptable levels of ammonium hydroxide for short periods of time. We initiated a high frequency sampling program which confirmed our concerns. The appropriate actions listed below describe the steps taken to date to ensure management of the ASD waste:

- Immediate shutdown of the PUREX plant was initiated.
- Immediate notification of the discharge to Ecology.
- Waste discharges to the crib after plant shutdown (September 1987) were ceased.
- An immediate investigation of the environmental effect of this and past discharges to the crib was initiated.
- Alternatives for controlling the waste stream until in-plant treatment processes are installed on the stream were evaluated.
- Laboratory and pilot scale studies on the most promising alternatives were initiated.

G. Sorlie

Page 3

In addition, the following actions are planned:

- When PUREX is restarted, the ASD discharge will be sent on an interim basis to the double-shell tank farm system where it can be managed to preclude discharge of a dangerous waste.
- During FY 1988 we will evaluate methods to handle the ASD waste stream without creation of dangerous waste to be discharged to the A-36B cribs. This evaluation will also address the effect of additional (non-dangerous waste) liquid discharges to the crib. If a suitable method is developed, we may propose discharging the (non-dangerous waste) liquid effluent into the A-36B crib beginning in spring 1988 after obtaining whatever regulatory approvals are required. If a suitable method is not found, we will proceed to close the A-36B crib.
- As a longer range corrective measure, methods to destroy most of the ammonia are being developed. Pilot scale tests underway have shown destruction of about 90% of the ammonia is possible. We expect that during FY 1988 these systems will be installed resulting in significant ammonia concentration reductions in the ASD waste stream. This in turn will essentially eliminate the source of ammonia leading to formation of the ammonium hydroxide, and thereby prevent dangerous waste discharges.
- Development of a complete recycle system to totally eliminate the ASD discharge from PUREX will also be pursued.

As a related matter, current DOE policy on radioactive waste management states that disposal operations involving discharges of contaminated liquids directly to the environment or natural soil column shall be replaced by other techniques (DOE 1984). The goal is to approach EPA drinking water standards through the use of Best Available Technology (BAT) economically feasible. In March 1987, we submitted a plan to Congress which would significantly reduce these waste streams. The elimination is planned in two phases, with the high priority streams undergoing treatment or elimination over the next seven years. The A-36B crib was one of these high priority streams. The elimination of this stream was planned for 1994. Recent events have led us to shorten this schedule for the A-36B crib.

G. Sorlie

Page 4

Close cooperation between Ecology, DOE-RL, and WHC is an important factor in achieving these objectives. We would like to meet with you or your staff to discuss specifics of this letter. If you have any questions, please contact H. E. McGuire of Westinghouse on (509) 373-5415.

Sincerely,

R E Lerch

R. E. Lerch, Manager
Defense Waste Management Division
Westinghouse Hanford Company

W B Schunk for

O. L. Olson, Director
Waste Management Division
U.S. Department of Energy
Richland Operations Office

EPA - Janet O'Hara

WDOE - Jon Neel
Roger Stanley



Department of Energy

Richland Operations Office
P.O. Box 550
Richland, Washington 99352

February 2, 1988

Mr. John Littler, Program Manager
Hazardous Waste Cleanup Program
State of Washington
Department of Ecology
Mail Stop PV-11
Olympia, Washington 98504-8711

Dear Mr. Littler:

WASHINGTON DEPARTMENT OF ECOLOGY COMPLIANCE ORDER DE 87-295, 216-A-36B CRIB

The U.S. Department of Energy - Richland Operations Office (U.S. DOE-RL) and Westinghouse Hanford Company (WHC) have taken the necessary actions to meet the requirements of Compliance Order DE 87-295. The requirements and actions taken are listed below.

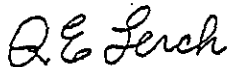
1. Immediately cease discharges to the 216-A-36B Crib facility.
 - o Discharges to the crib were stopped prior to the issuance of the compliance order.
2. By February 2, 1988, U.S. DOE-RL shall identify and report to the department all other hazardous and non-hazardous wastes that have been discharged to the 216-A-36B Crib. This report must characterize these wastes and provide information including waste constituents, concentrations, volumes, frequency of discharges and dates of releases. Formal waste characterization pursuant to Chapter 173-303-070 shall also be conducted.
 - o A report, "Properties and Environmental Impact of Ammonia Scrubber Discharge Waste to the 216-A-36B Crib," is attached (Attachment 1).
3. By February 2, 1988, U.S. DOE-RL shall submit to the department a Hazardous Waste Part A permit application in accordance with 173-303-805.
 - o The Part A permit application for 216-A-36B Crib is attached (Attachment 2).
4. By February 2, 1988, comply with all applicable requirements of Chapter 173-303 WAC, except for 40 CFR Part 265 Subpart F. Compliance with 40 CFR Part 265 Subpart F shall take place no later than June 1, 1988.

Mr. John Littler
Page 2
February 2, 1988

- o The interim status closure/post-closure plan (excluding sections dealing with groundwater monitoring) is attached (Attachment 3). Groundwater monitoring wells will be installed by June 1, 1988, as required, and the closure/post-closure plan will be amended to include groundwater data by September 30, 1989.
- 5. By February 2, 1988, U.S. DOE-RL shall develop and submit to Ecology engineering studies and designs which will preclude all discharges to the 216-A-36B Crib.
 - o The actions taken to preclude discharges to the 216-A-36B Crib are documented in Attachment 4.

If you have any questions regarding these data/documents, please contact H. E. McGuire on (509) 373-5415 or L. L. Powers on (509) 373-4981.

Very truly yours,



R. E. Lerch, Manager
Defense Waste Management Division
Westinghouse Hanford Company



R. D. Izatt, Director
Waste Management Division
U.S. Department of Energy
Richland Operations Office

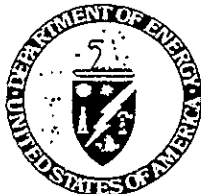
dh

Attachments 4

U.S. DOE-RL - A. W. Kellogg, AMO (w/o attachments)

EPA - J. O'Hara

WDOE - J. Neel
R. Stanley



Department of Energy

Richland Operations Office
P.O. Box 550
Richland, Washington 99352

JUL 12 1988

Mr. Jon Neel, Enforcement Officer
State of Washington
Department of Ecology
Mail Stop PV-11
Olympia, Washington 98504-8711

Dear Mr. Neel:

COMPLIANCE ORDER DE 87-295

Compliance Order DE 87-295 required that ground water monitoring wells be installed at the 216-A-36B Crib by June 1, 1988, in accordance with the requirements of 40 CFR Part 265 Subpart F.

By means of this letter, U.S. Department of Energy-Richland Operations Office and Westinghouse Hanford Company are notifying you that a total of five new ground water monitoring wells were completed May 16, 1988. Four of the five wells were sampled before June 1; silt in the water prevented the fifth well from being sampled until June 2, 1988.

Information regarding well completion depths, locations, sample dates, and analytical parameters is enclosed. Information is also provided for three wells which were in existence before the issuance of the compliance order.

If you have any questions regarding the 216-A-36B Crib well drilling or sampling activities, please contact Ms. M. J. Anthony on (509) 376-8375.

Sincerely,

A handwritten signature in dark ink, appearing to read "R. D. Izatt".

R. D. Izatt, Director
Environmental Restoration Division
Richland Operations Office

A handwritten signature in dark ink, appearing to read "R. E. Lerch".

R. E. Lerch, Manager
Environmental Division
Westinghouse Hanford Company

ERD:MJA

Enclosure.

cc w/encl:

R. F. Stanley, Ecology

R. E. Lerch, WHC

P. S. Peacock, WHC

P. J. Mitchell, PNL

Status of Drilling and Sampling at 216-A-36B Crib

Five ground-water monitoring wells were installed for this project; 299-E17-14, 299-E17-15, 299-E17-16, 299-E17-17, and 299-E17-18. The wells were drilled using a cable tool rig. The wells are open to approximately the top 15 feet of the unconfined aquifer. The depth to the water table in the vicinity around 216-A-36B is about 313' from ground-surface. The constituents analyzed for in the ground-water are listed on the attached sheet, Quarterly Sampling and Analysis Plan. The following is a summary of the construction and sampling for each well.

Well 299-E17-14

Well started 3/22/88 Well completed 5/16/88

Final depth 331'

Date ground-water sampled (planned for 6/2/88)

Uncompleted work No ground-water sample was obtainable from the well as of 6/1/88 due to silt in the water. The sampling pump will be pulled, and a sample obtained by bailer. Other unfinished work includes, leveling the concrete pad surrounding the well, attaching locking well caps, and permanent marking of the well's identification.

Well 299-E17-15

Well started 3/17/88 Well completed 5/16/88

Final depth 329'

Date ground-water sampled 5/31/88

Uncompleted work Unfinished work includes, leveling the concrete pad surrounding the well, attaching locking well caps, and permanent marking of the well's identification.

Well 299-E17-16

Well started 3/10/88 Well completed 5/16/88

Final depth 329'

Date ground-water sampled 5/25/88

Uncompleted work Leveling the concrete pad surrounding the well, attaching locking well caps, and permanent marking of the well's identification.

Well 299-E17-17

Well started 3/17/88 Well completed 5/16/88

Final depth 331'

Date ground-water sampled 5/25/88

Uncompleted work Leveling the concrete pad surrounding the well, attaching locking well caps, and permanent marking of the well's identification.

Well 299-E17-18

Well started 3/28/88 Well completed 5/16/88

Final depth 329'

Date ground-water sampled 5/25/88

Uncompleted work Leveling the concrete pad surrounding the well, attaching locking well caps, and permanent marking of the well's identification.

Well 299-E17-5 (existing well)

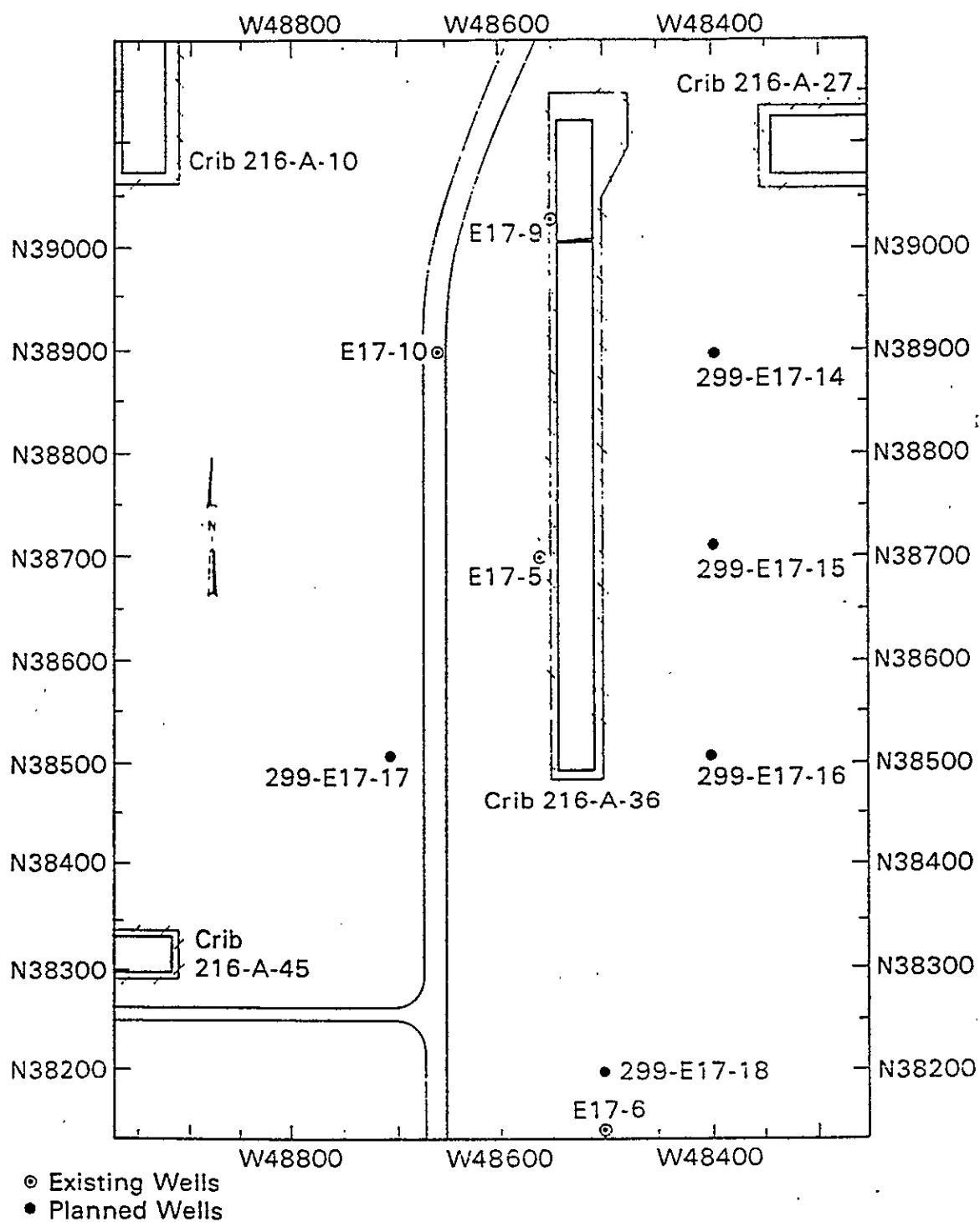
Date ground-water sampled 5/24/88

Well 299-E17-9 (existing well)

(pump column needs repair)

Well 299-E17-6 (existing well) (for qualitative data only)

Date ground-water sampled 5/24/88



Monitoring Well Locations Map

QUARTERLY SAMPLING AND ANALYSIS PLAN

All Wells

Ammonium
Enhanced Metals, Filtered and Unfiltered
Arsenic, Filtered and Unfiltered
Selenium, Filtered and Unfiltered
Mercury, Filtered and Unfiltered
Lead, Filtered and Unfiltered
Ions, Bromide, Nitrate
Enhanced Volatile Organics
Coliform
Total Carbon
Total Organic Halogens
Total Organic Carbon
ABN (Acid, Base, Neutrals)
Alpha, Beta
Radium
Phenol
Pesticides, Herbicides
Field pH, Conductivity
Temperature

Except 299-E17-6

No Radium, Pesticides, Herbicides, ABN or Volatile Organics

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